



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,636	07/11/2001	Thomas Malzahn		7902

7590 08/14/2002
Felix J. D'Ambrosio
JONES, TULLAR & COOPER, P.C.
Eads Station
P.O. Box 2266
Arlington, VA 22202

EXAMINER

JACKSON, ANDRE K

ART UNIT PAPER NUMBER

2856

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,636

Applicant(s)

MALZAHN, THOMAS

Examiner

Andre' K. Jackson

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 23 February 2001. It is noted, however, that applicant has not filed a certified copy of the 101 08 9937 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4,6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Müller et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Müller et al. discloses a "Device for determining the filling level of a filling material in a container" which has a signal generating unit (8), an input coupling unit (9), an antenna connected to the input coupling unit (7), a conductive layer (13) containing a feed structure (17) with a plurality of cutouts and a receiving/evaluating circuit (10).

Regarding claim 2, Müller et al. discloses where the cutouts form slot-shaped recesses and where each cutout defines a longitudinal axis that are aligned substantially radially (Figure 2).

Regarding claim 3, Müller et al. discloses where the dielectric layer defines a center with one group of cutouts arranged at approximately a first radius and at least one group of cutouts arranged at approximately a second radius from the center of the dielectric layer (Figure 2).

Regarding claim 4, Müller et al. discloses where the cutouts of one further group of cutouts are spaced from cutouts of the first group (Figure 2).

Regarding claim 6, Müller et al. discloses where a dielectric protective layer is connected to at least one dielectric layer on the side containing the cutouts (Figure 2).

Regarding claim 8, Müller et al. discloses where at least one dielectric layer and protective layer comprise a circular disk (Figure 2).

Regarding claim 9, Müller et al. discloses where the measuring signals comprise broadband measuring signals.

Regarding claim 10, Müller et al. discloses where the antenna and its cutouts cooperate such that the antenna essentially emits measuring signals of a selected mode.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,2,5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Locke in view of Bellee et al.

Regarding claim 1, Locke discloses a "Method and apparatus for material level measurement using stepped frequency microwave signals" which has a signal-generating unit (8), an input coupling unit (12), an antenna (11), and a receiving and evaluating unit (4). Locke does not disclose a dielectric layer containing a feed structure and a plurality of cutouts. However, Bellee et al. discloses a "Dual polarized image antenna" which has a dielectric layer containing a feed structure (25) and a plurality of cutouts (Figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Locke to include a dielectric layer containing a feed structure and a plurality of cutouts as taught by Bellee et al. since multiple frequencies can be used with this antenna.

Regarding claim 2, Locke discloses slot shaped recesses that are substantially radial (Figure 4).

Regarding claim 3, Locke discloses where the dielectric layer defines a center with one group of cutouts arranged at approximately a first radius from the center of the dielectric layer and at least one further group of cutouts arranged at approximately a second radius from the center of the dielectric layer (Figure 4).

Regarding claim 4, Locke discloses where one group of cutouts are spaced from the cutouts of the first group (Figure 4)

Regarding claim 5, Locke does not disclose the dimensions of the slots. However, it is considered a design choice and clearly within the preview of the skilled artisan to have the slots made a particular size.

Regarding claim 6, Locke does not disclose a dielectric layer connected to at least one dielectric on the side containing the cutouts. However, Bellee et al. does disclose a dielectric layer connected to at least one dielectric on the side containing the cutouts (Figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Locke to include a dielectric layer connected to at least one dielectric on the side containing the cutouts as taught by Bellee et al. since they are from the same field of endeavor.

Regarding claim 7, neither Locke nor Bellee et al. disclose where the cutouts and feed structure are applied to at least one dielectric layer by etching. However, it is considered a design choice and clearly within the preview of the skilled artisan to have the cutouts and feed structure applied to at least one dielectric layer by etching.

Regarding claim 8, Locke does not disclose where at least one dielectric layer and dielectric protective layer comprise a circular disk. However, Bellee et al. does disclose where at least one dielectric layer and dielectric protective layer comprise a circular disk (Figure 1).

Therefore, the skilled artisan would have been inclined to modify Locke to include where at least one dielectric layer and dielectric protective layer comprise a circular disk as taught by Bellee et al. since they are from the same field of endeavor.

Regarding claim 9, Lock discloses where measuring signals comprise signals in the broadband range.

Regarding claim 10, Locke discloses where the antenna and its cutouts cooperate where the antenna emits measuring signals of a selected mode.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' K. Jackson whose telephone number is (703) 305-1522. The examiner can normally be reached on Mon.-Fri. 7AM-4PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are N/A for regular communications and N/A for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Application/Control Number: 09/901,636

Page 8

Art Unit: 2856

A.J. 
August 9, 2002


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800